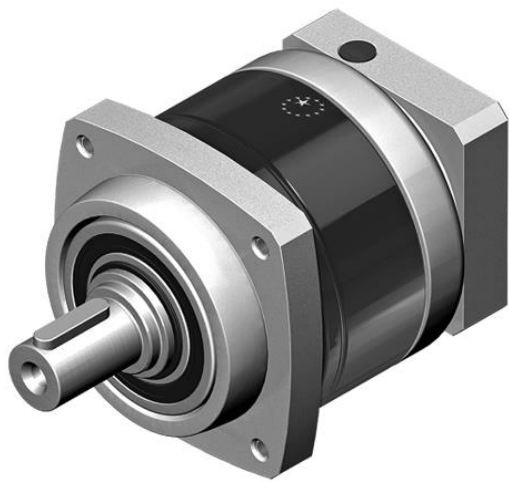


# PSII und PSIIR-Serie Planetengetriebe



## PSII Planetengetriebe

### Technische Daten

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Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte und steife Bauweise

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### Nenn-Abtriebsdrehmoment

T<sub>2N</sub>: 8 – 459 Nm

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### Untersetzungen

1-stufig: 3 / 4 / 5 / 7 / 9 / 10

2-stufig: 15 / 16 / 20 / 25 / 30 / 35 / 40 / 50 / 70 / 100

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### Geringes Verdrehspiel

1-stufig: 6 – 8 Winkelminuten

2-stufig: 8 – 10 Winkelminuten

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### Hoher Wirkungsgrad

1-stufig:  $\geq 97\%$

2-stufig:  $\geq 94\%$

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### Arbeitstemperatur

0°C bis 90°C mit Standardfett

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### Baugrößen

PSIIA / PSIIB / PSIIC / PSIID / PSII E

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### Verwendung

Anwendungen im Maschinenbau, bei denen kostengünstige und gleichzeitig hochwertige Planetengetriebe gefordert sind.



## PSIIR Winkelplanetengetriebe

### Technische Daten

Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte und steife Bauweise

### Nenn-Abtriebsdrehmoment

T2N: 8 – 459 Nm

### Untersetzungen

1-stufig: 3 / 4 / 5 / 7 / 9 / 10

2-stufig: 15 / 16 / 20 / 25 / 30 / 35 / 40 / 50 / 70 / 100

### Geringes Verdrehspiel

1-stufig: 10 – 12 Winkelminuten

2-stufig: 12 – 14 Winkelminuten

### Hoher Wirkungsgrad

1-stufig:  $\geq 93\%$

2-stufig:  $\geq 90\%$

### Arbeitstemperatur

0°C bis 90°C mit Standardfett

### Baugrößen

PSIIRA / PSIIRB / PSIIRC / PSIIRD / PSIIRE

### Verwendung

Anwendungen im Maschinenbau, bei denen kostengünstige und gleichzeitig hochwertige Planetengetriebe gefordert sind.



# PSII / PSIIR Spezifikationen

Model No.	Stages	Ratio <sup>(1)</sup>	Type	PSII A	PSII B	PSII C	PSII D	PSII E	
				PSIIR A	PSIIR B	PSIIR C	PSIIR D	PSIIR E	
Nominal Output Torque $T_{2N}$	1	3	All	16	42	110	217	430	
		4		16	42	113	223	440	
		5		15	40	118	220	435	
		7		12	35	96	198	366	
		9		8	24	60	125	273	
		10		10	27	68	155	295	
	2	15		15	40	109	213	424	
		16		16	42	116	228	452	
		20		16	42	116	230	454	
		25		15	40	123	228	450	
		30		15	40	108	212	422	
		35		12	35	100	206	382	
		40		16	43	117	232	459	
		50		15	40	123	228	450	
		70		12	35	100	206	382	
		81		8	24	59	131	285	
		100		10	27	70	162	308	
		Emergency Stop Torque $T_{2NOT}$		Nm	1,2	3~100	All	3 times $T_{2N}$	
Max. Acceleration Torque $T_{2B}$	Nm	1,2	3~100	All	$T_{2B} = 60\%$ of $T_{2NOT}$				
No Load Running Torque <sup>(4)</sup>	1	3~10	PSII	0.05	0.10	0.40	0.80	2.50	
			PSIIR	0.10	0.15	0.45	0.85	2.55	
	2	15~100	PSII	0.05	0.10	0.30	0.40	0.80	
			PSIIR	0.10	0.15	0.35	0.45	0.85	
Backlash <sup>(2)</sup>	1	3~10	PSII	$\leq 8$	$\leq 7$	$\leq 6$	$\leq 6$	$\leq 6$	
			PSIIR	$\leq 12$	$\leq 11$	$\leq 10$	$\leq 10$	$\leq 10$	
	2	15~100	PSII	$\leq 10$	$\leq 9$	$\leq 8$	$\leq 8$	$\leq 8$	
			PSIIR	$\leq 14$	$\leq 13$	$\leq 12$	$\leq 12$	$\leq 12$	
Torsional Rigidity	Nm/arcmin	1,2	3~100	All	0.6	1.5	6	10.5	18
Nominal Input Speed $n_{1N}$	rpm	1,2	3~100	All	4,500	4,000	3,600	3,600	2,500
Max. Input Speed $n_{1B}$	rpm	1,2	3~100	All	8,000	6,000	6,000	4,800	3,600
Max. Radial Load $F_{2rB}$ <sup>(3)</sup>	N	1,2	3~100	All	840	1,290	1,510	3,780	5,420
Max. Axial Load $F_{2aB}$ <sup>(3)</sup>	N	1,2	3~100	All	420	645	755	1,890	2,710
Service Life <sup>(5)</sup>	hr	1,2	3~100	All	20,000				
Operating Temp	°C	1,2	3~100	All	0° C~ +90° C				
Degree of Gearbox Protection		1,2	3~100	All	IP65				
Lubrication		1,2	3~100	All	Synthetic lubrication grease				
Mounting Position		1,2	3~100	All	All directions				
Running Noise <sup>(4)</sup>	dB(A)	1,2	3~100	PSII	$\leq 60$	$\leq 62$	$\leq 64$	$\leq 66$	$\leq 68$
				PSIIR	$\leq 70$	$\leq 72$	$\leq 74$	$\leq 75$	$\leq 77$
Max. bending moment based on the gearbox input flange $M_b$ <sup>(6)</sup>	Nm	1,2	3~100	PSII	5	12	22	45	54
				PSIIR	3	6	10	17	19
Efficiency $\eta$	%	1	3~10	PSII	$\geq 97\%$				
				PSIIR	$\geq 93\%$				
		2	15~100	PSII	$\geq 94\%$				
				PSIIR	$\geq 90\%$				

(1) Ratio ( $i = N_{in} / N_{out}$ ).

(2) Backlash is measured at 2% of Nominal Output Torque  $T_{2N}$ .

(3) Applied to the output shaft center at 100 rpm.

(4) These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at 3,000 rpm without load, By ratio smaller than 10, the noise value would be 3-5dB higher.

(5) For continuous operation, the service life time is less than 10,000 hrs.

(6) Max. motor weight\* (kg) =  $\frac{0.1 \times M_b}{\text{motor length (m)}}$

\*with symmetrically distributed motor weight

\*with horizontal and stationary mounting

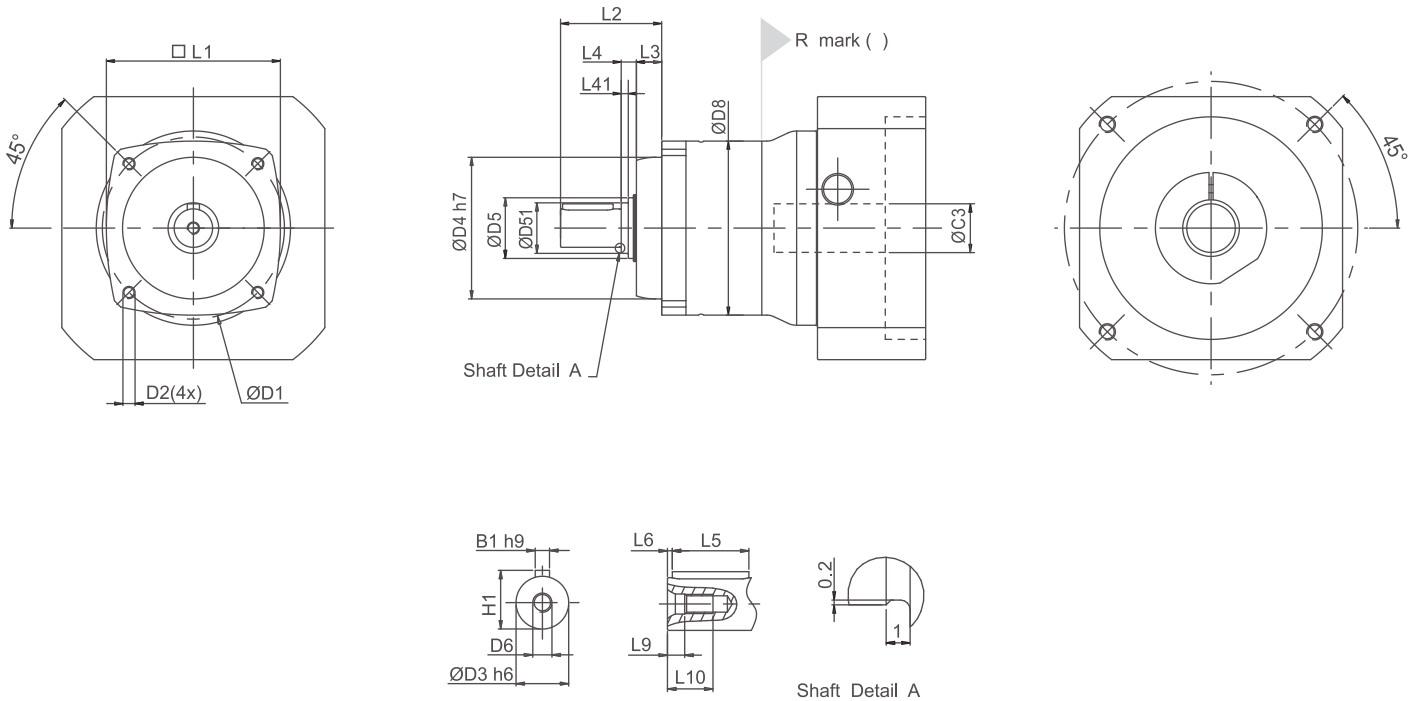
## Massenträgheitsmoment PSII

Model No.	PSII A		PSII B		PSII C		PSII D		PSII E	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
$\emptyset^{(A)}$ (C3)										
8	0.10	0.10	0.12	0.10	-	-	-	-	-	-
11	0.16	0.16	0.19	0.16	-	-	-	-	-	-
14	-	-	0.22	0.20	0.36	0.24	-	-	-	-
19	-	-	1.53	1.51	1.70	1.58	2.20	1.73	-	2.18
24	-	-	-	-	2.24	2.12	2.74	2.27	4.52	2.73
28	-	-	-	-	2.68	2.55	3.17	2.70	4.94	3.15
32	-	-	-	-	-	-	7.77	7.30	9.70	7.91
35	-	-	-	-	-	-	10.80	10.30	12.80	11.00
38	-	-	-	-	-	-	14.00	13.50	16.00	14.20
42	-	-	-	-	-	-	-	-	24.50	-

## Massenträgheitsmoment PSIIR

Model No.	PSIIR A		PSIIR B		PSIIR C		PSIIR D		PSIIR E	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
$\emptyset^{(A)}$ (C3)										
8	0.18	0.18	0.36	0.36	-	-	-	-	-	-
11	0.20	0.20	0.39	0.39	-	-	-	-	-	-
14	-	-	0.43	0.43	1.87	1.87	-	-	-	-
19	-	-	1.24	1.24	2.67	2.67	6.80	6.80	-	13.57
24	-	-	-	-	2.97	2.97	7.10	7.10	13.87	13.87
28	-	-	-	-	3.47	3.47	7.59	7.59	14.36	14.36
32	-	-	-	-	-	-	10.56	10.56	17.33	17.33
35	-	-	-	-	-	-	11.97	11.97	18.74	18.74
38	-	-	-	-	-	-	13.95	13.95	20.79	20.79
42	-	-	-	-	-	-	-	-	26.54	-

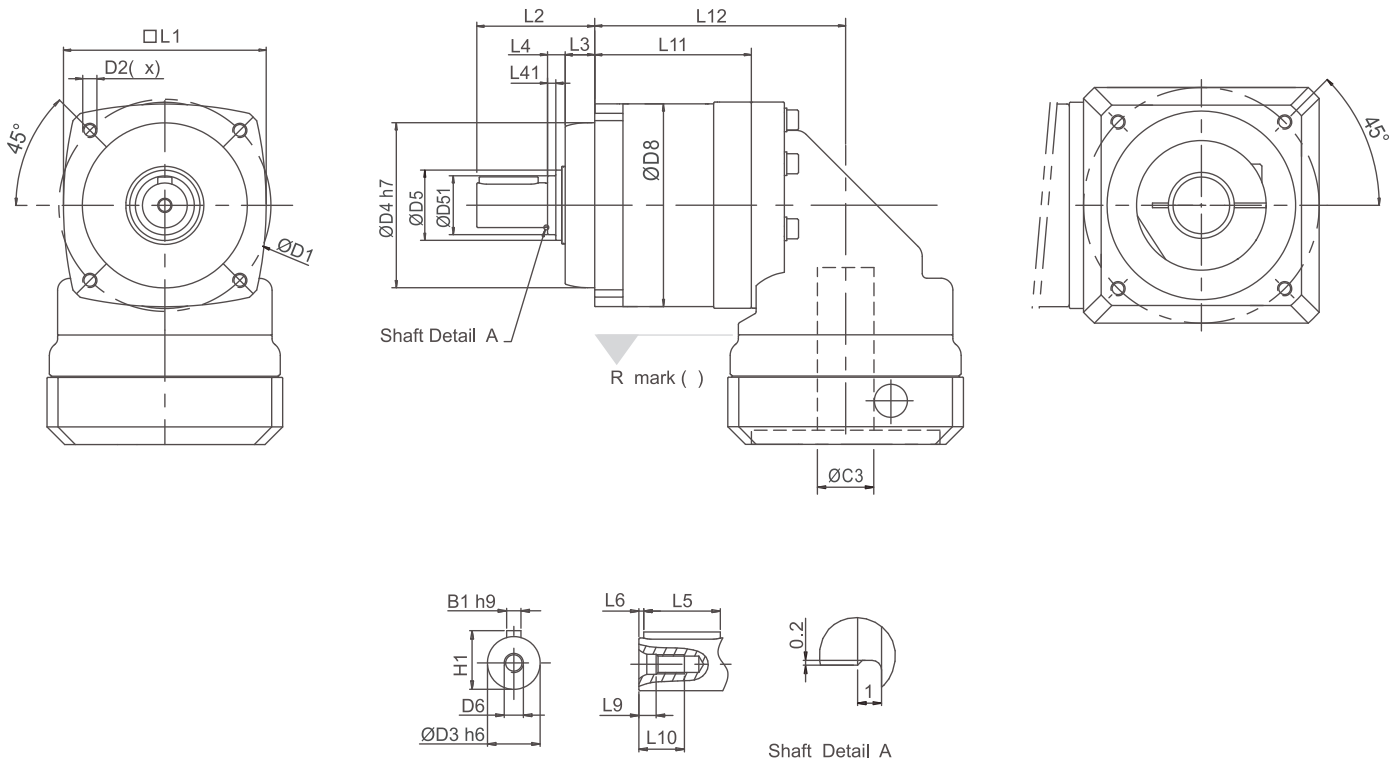
# PSII Abmessungen



Dimension	PSII A		PSII B		PSII C		PSII D		PSII E	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
D1	47		60		90		115		135	
D2	M4X9		M5X10		M6X12		M8X18.5		M10X18	
D3 h6	10		12		19		24		32	
D4 h7	38		50		70		90		110	
D5	17		22		30		40		55	
D51	-		-		25		-		-	
D6	M3X0.5P		M4X0.7P		M6X1P		M8X1.25P		M12X1.75P	
D8	44		60		86		114		140	
L1	44		60		86		114		140	
L2	25		32		50		61		75	
L3	6.5		8.5		12.5		16		14.5	
L4	2.5		3.5		7.5		5		5.5	
L41	-		-		3.5		-		-	
L5	10		16		25		32		50	
L6	3		2		1		3		2	
L9	2.6		4.5		5		7.2		10	
L10	9		10		16.5		19		28	
B1 h9	3		4		6		8		10	
H1	11.2		13.5		21.5		27		35	

(1) Dimensions are related to motor interface.

# PSIIR Abmessungen



Dimension	PSIIR A		PSIIR B		PSIIR C		PSIIR D		PSIIR E	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
D1	47		60		90		115		135	
D2	M4X9		M5X10		M6X12		M8X18.5		M10X18	
D3	h6	10	12	19	24	32				
D4	h7	38	50	70	90	110				
D5		17	22	30	40	55				
D51		-	-	25	-	-				
D6	M3X0.5P		M4X0.7P		M6X1P		M8X1.25P		M12X1.75P	
D8	44		60		86		114		140	
L1	44		60		86		114		140	
L2	25		32		50		61		75	
L3	6.5		8.5		12.5		16		14.5	
L4	2.5		3.5		7.5		5		5.5	
L41	-		-		3.5		-		-	
L5	10		16		25		32		50	
L6	3		2		1		3		2	
L9	2.6		4.5		5		7.2		10	
L10	9		10		16.5		19		28	
L11	47	62	56	76	66.5	93	92	128	116	163.5
L12	72	87	85.5	105.5	106.5	133	143	179	173	220.5
B1	h9	3	4	6	8	10				
H1		11.2	13.5	21.5	27	35				

(1) Dimensions are related to motor interface.